Although architectural guidebooks have a long history, their format is still based on a model developed in the Renaissance. Are these guides on the brink of a new digital era?

The architectural guidebook: from Palladio to pod

Alan Day and Vaughan Hart

In 1554 the Renaissance architectural master, Andrea Palladio (born Andrea della Gondola, or 'di Pietro'), produced two little-known guidebooks to the city of Rome.[1] These were unillustrated texts, one of which described the ancient wonders of the city while the other concentrated on the later medieval churches.[2] Guidebooks of this kind had existed since medieval times but Palladio introduced a new kind of structure to the guide by organising the material into logical routes which the tourist could follow. Since then architectural guidebooks have proliferated and the introduction of photography and high quality graphics has changed their appearance significantly. However, in many respects things have not altered a great deal. Architectural guidebooks still present a view of a city which is that of a single individual (or small group of authors) and the selection of the material determines what is deemed to be of significance. Some guides, such as those by Nikolaus Pevsner, attempt to present the buildings in as neutral a way as possible in order to give the work a degree of objectivity but, nonetheless, the visitor is still being presented with a particular view of the city.

Over the past ten years there have been significant technological developments which have the potential to alter radically the whole idea of the architectural guide. Both mobile phone and GPS technology provide positional information which allows the visitor to be precisely located within a city, while wireless communications systems allow tourists to receive different kinds of information as they move from place to place. This technology provides a vehicle through which new kinds of city guides can be invented based on the visitor's freedom of choice and desire to roam, and, although this technology is unlikely to replace the traditional paper-based guidebook with its fixed itineraries, it offers some interesting new ways of exploring urban history. In this paper Palladio's guidebooks to Rome will be used as a starting point, as they represent a particular, proscribed way of understanding architectural history. Although his use of itineraries has become the *de facto* standard for the modern guidebook, it may be that new technology offers the possibility of a re-emergence of the alternative, more flexible approach.

Palladio's two guidebooks to Rome

The first of Palladio's guidebooks comprises about sixty pages in a pocket-sized format, and is organised into brief descriptions of the appearance and history of the ancient ruins, written for travellers and pilgrims who flocked to Rome to witness its marvels at first hand.[3] It includes sections on the bridges, hills, water supply, aqueducts, baths, circuses, theatres, forums, arches, temples, and columns of the ancient city, as well as legendary buildings such as the Golden House of Nero. The text offers a neutral catalogue of ancient archetypal structures, prefiguring modern methods of classification by type used by scientific archaeology. In this approach Palladio followed his peers, men such as Pirro Ligorio whose *Libro delle antichita di Roma* was published in Venice in 1553, with its categorised accounts of the circuses, theatres and amphitheatres of the ancient city.

In the same year as Palladio's guide to antiquities first appeared - but slightly later if his own account is to be believed - he published a companion volume, a guide to Rome's churches. About the same length as the antiquities guide, this was written to provide pilgrims with a religious itinerary and, on occasions, includes Palladio's judgement as to the relative artistic value of the works being visited. For the most part he does not praise contemporary churches, instead his focus is mostly on liturgical artworks, relics and icons, rather than on architects and architecture. Palladio's cautious, even conservative, attitude to the achievements of his age is underlined by the fact that despite mentioning works by a number of the more celebrated Renaissance architects and artists - including Bramante, Raphael, and Vignola - he does not cite them by name, apart from a single reference to Michelangelo when describing his tomb design for Julius II. Palladio's approach is similar in his guidebook to the antiquities, where he includes structures from the Middle Ages like the Tor de'Conti and Torre delle Milizie, but

buildings from the more recent, early Renaissance are omitted - apart that is from a brief mention of the Belvedere and the Vatican, and the paintings of Michelangelo. Clearly, these guidebooks were not intended to be architectural treatises, providing models of good practice along the lines of his famous Quattro *Libri.*[4]

Palladio's guidebooks were unillustrated, thereby allowing the visitor to appreciate the city's monuments through his words alone. The topical overlap between the two works is limited, and concerns the consecration of ancient buildings such as the Pantheon. In serving to highlight the magnificence of the ancient, pre-Christian era alongside the Christian splendours of his own, modern age, both Palladio's guidebooks had a topographical antecedence in the works of Renaissance masters such as Alberti and Raphael, and in the many medieval guidebooks to the ancient city collectively known as the *Mirabilia.*

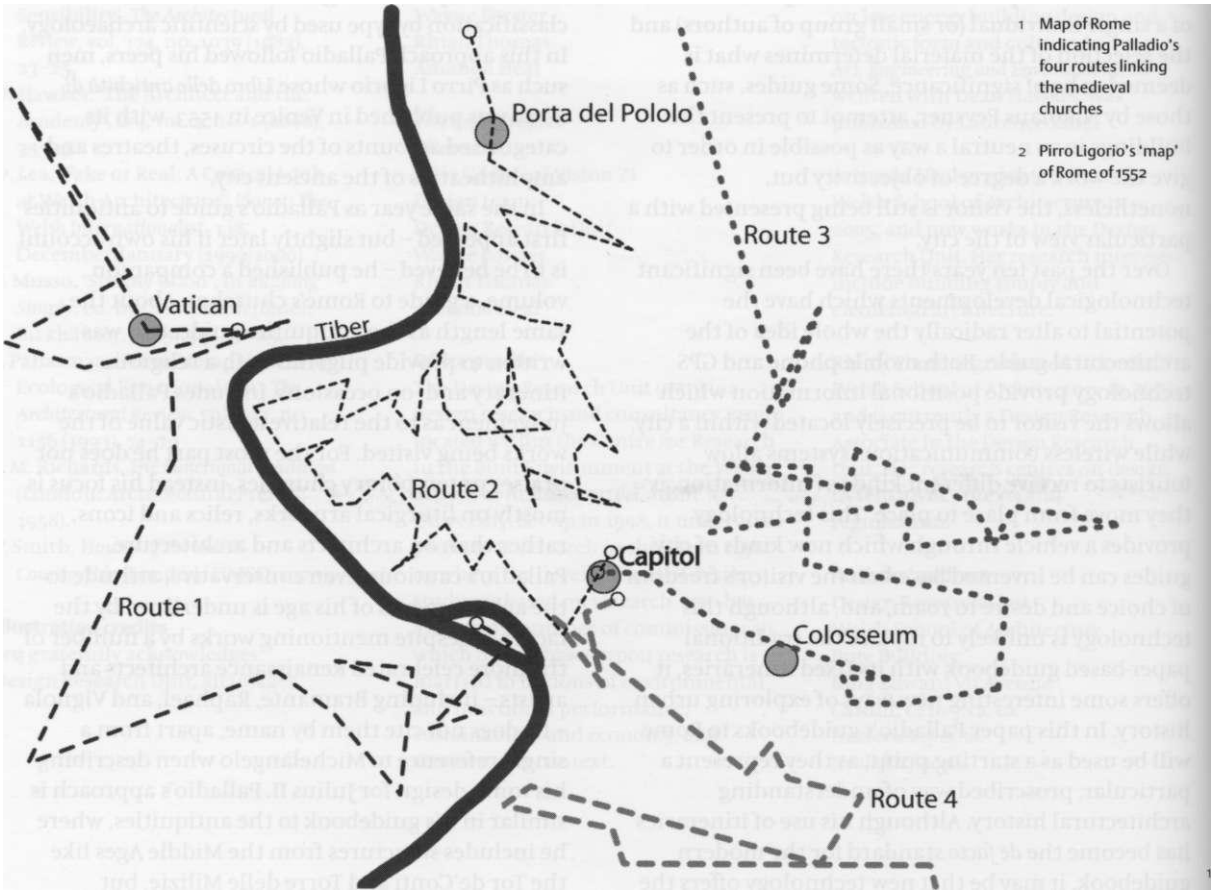
The structure of Palladio's guides

Palladio's guide to the antiquities followed the works of Sebastiano Serlio and Ligorio in emphasising the civic importance and virtue of the ancient monuments of Rome arranged by 'type'. However, the structure of his guide to the churches differs in that, being organised into four sections, the work highlights four preferred, or ideal, routes through the city [1]. The effect of these routes was to divide the modern city into quadrants. In the introduction to his church guide Palladio emphasises the novelty and utility of his pilgrimage routes, when compared to earlier guides, and the effort involved in arranging them by ordering 121 churches. He observes:

> *'And because these holy things are scattered among many churches and cemeteries in Rome, I thought that in order to allow everyone the possibility of visiting them easily in their current locations without long meanderings, I would describe them in a new order and sequence - and all who follow this will be led to give no little praise for this my effort.'*[6]

Where earlier routes in the medieval guidebook tradition followed a haphazard order, Palladio's text takes the tourist on four logical journeys covering most of the main churches of the city. Beginning, naturally enough, with Rome's seven principal churches, the first route links the two churches on the Tiber Island to nine in Trastevere and nine in the Vatican Borgo, ending at Santa Maria in Traspontina. The next sequence, the longest, begins at the Porta del Popolo - the northern entrance to Rome - includes 52 churches and ends at the Capitoline Hill. The third and fourth itineraries both begin at the Capitol, one heading north towards the mountains and the other, south towards the ancient city. Where the city's wonders had been revealed to the medieval tourist through a degree of hunting and, as Palladio puts it, 'meanderings', now they were to be laid out in a logical sequence compatible with a more rational age.

Palladio's arrangement of the ancient monuments by 'type' in his antiquities guide followed the example of the medieval guidebook tradition. He begins, logically enough, with the walls of the city, turning next to the Roman gates through which his



1 Map of Rome indicating Palladio's four routes linking the medieval churches

2 Pirro Ligorio's 'map' of Rome of 1552

readers 'enter' the city, before moving on to the principal streets and roads, and then crossing the Tiber via its bridges to view the legendary seven hills. The essential physical features and monumental structures within the city are then each dealt with in an encyclopedic manner, starting with the water supply, sewer, aqueducts and cisterns. It is as if Palladio - ever the architect - is rehearsing the original laying-out of the great city. Then come the public buildings for pleasure: hot-baths, lakes for naval battles, racetracks, theatres and amphitheatres; after which are those for utility, namely the markets. These are followed by military monuments in the city, starting with triumphal arches.

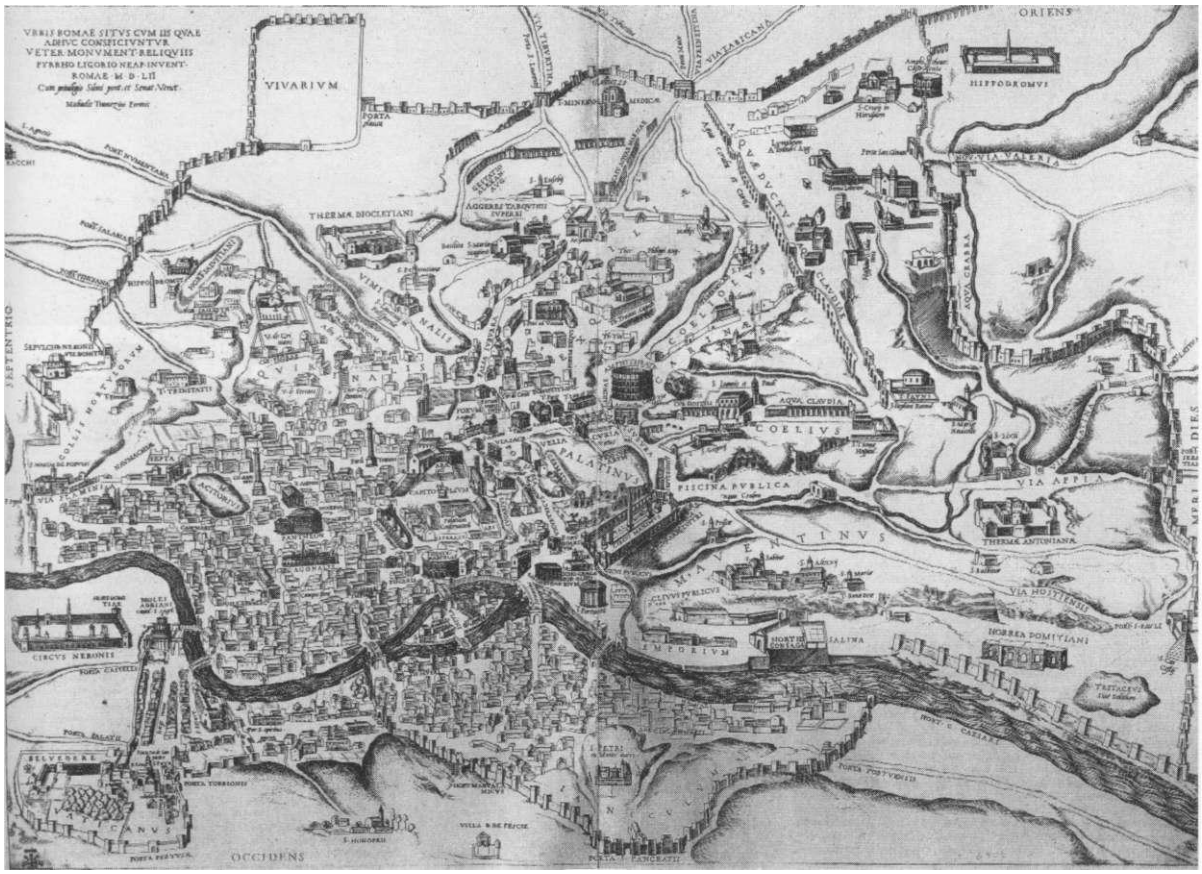
As with Alberti's map of Rome and traditional topographical views of the city, Palladio's city has an implied circularity to the extent that he begins with its 'circumference', described as *del circuito,* while in the physical centre of the book (page 16 out of 32) he describes the Capitol - the city's symbolic centre and the physical centre of Alberti's map. Despite its fundamental difference in structure, the church guide also uses the Capitoline as the hub of the system of routes leading to and from the outer walls in the different quadrants of the city. In his concluding remarks on antiquities Palladio deals with temples, villas and pastures outside the ancient city boundary - a boundary emphasised by the final section on how many times the city of Rome was taken by invaders (such as Charles V in 1527).

Ultimately Palladio's guides represent two types of history: namely a medieval one comprising myths and legends, and a more rational, modern one founded on site analysis, written evidence and classification by 'type'. The books are thus transitional in character, reflecting in some ways their author's own transformation from 'di Pietro' the stonemason - rooted as the stonemason's training was in medieval craft legends - to 'Palladio' the architect - whose training was based on Renaissance humanism and the study of the Roman author Vitruvius.

The Palladio exhibition

In order to celebrate the 500th anniversary of Palladio's birth and following their translation of the guides, the authors were invited to organise an exhibition on Palladio's guidebooks at the British School in Rome to be held in 2008. Although it would have been possible to rely on conventional maps to show the buildings and routes that Palladio selected, it was felt that a digital display could provide a richer environment. A computer model of Rome around 1550 was therefore constructed as the centrepiece of the exhibition and a parallel web site developed so that the exhibition material could be made available to a broader audience.

The landform of Rome came from the Institute for Advanced Technology in the Humanities at the University of Virginia,[6] and a present-day map of the city was scanned, scaled and draped over this terrain model to provide an accurate way of locating the position of those buildings that still exist. The city walls were then reconstructed using present-day information as the starting point, supplemented



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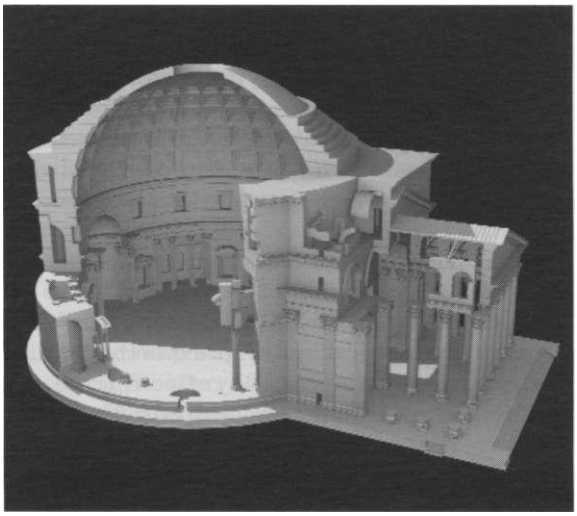
with historical maps in order to recreate destroyed gates and sections of the city walls.[7] The streets and buildings were then constructed using a number of illustrations of Rome from the fifteenth and sixteenth centuries including maps by Alessandro Strozzi (fifteenth century) and Taddeo di Bartolo (1406-14), with Pirro Ligorio's plan of 1552 being the principal source [2]. This is an aerial view of the city and thus provides some three-dimensional information on the form of the more important buildings. The seven principal churches of Rome were modelled from historical views (such as that by Antonio Lafréry of 1575), but the smaller medieval churches are for the most part indistinguishable and have been modelled as more generic blocks.

The principal ancient and in some cases medieval monuments have also been modelled where information is available, using contemporary photographs and Ligorio's near-contemporary map as the main sources [3 & 4]. In instances such as St. Peter's, the 'modern' basilica of which was still under construction at the time of the guides, a number of historical sources had to be used to visualise for the first time what the pilgrim would have witnessed in 1554 [5]. These include the woodcuts of Serlio, Ligorio's three-dimensional map, views of the basilica under construction (those by Maarten van Heemskerck, for example) and of the Belvedere Court at that time (that by Giovanni Antonio Dosio, for example). Palladio's four routes around the churches of Rome were then superimposed onto the city model, thus illustrating again for the first time how



3 Model of the Pantheon

4 Castel Sant'Angelo (on the site of the Tomb of Hadrian), listed by Palladio in his antiquities guide

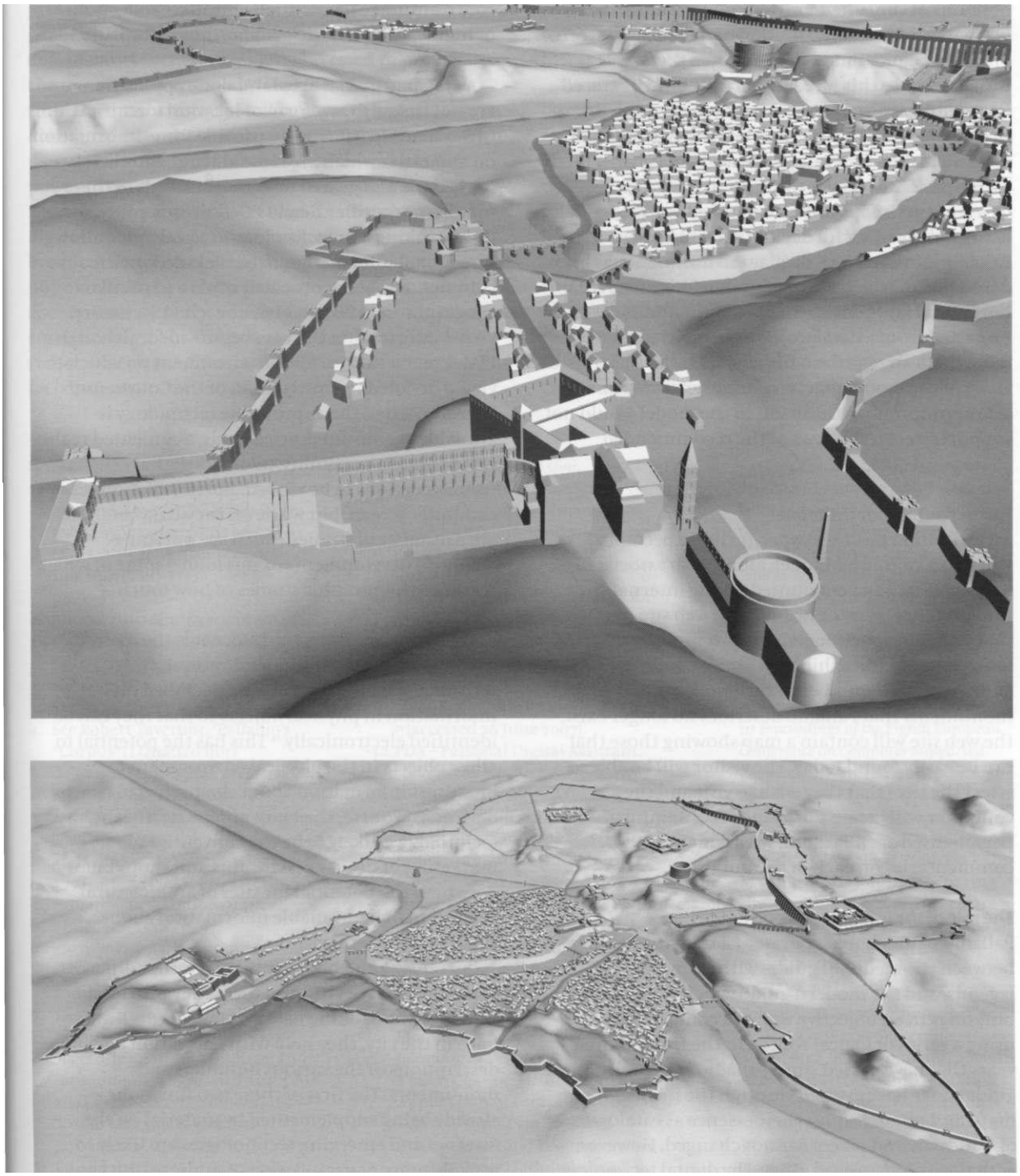
5 Detail of the Rome model showing the Vatican and the Belvedere

6 General view of the Rome model

the ancient remains located alongside the churches on each route could have been appreciated by the sixteenth-century visitor (given that these are not mentioned in the church guide). The model therefore brings the contents of the two guides together in a way that the exhibition visitor can fully appreciate.

Displaying the model

The outcome of this work was a three-dimensional model of Rome around 1550 with key buildings and monuments, including all the most important ones selected by Palladio, modelled in more detail than the surrounding fabric [6]. Given that the context for displaying the model is an exhibition where it will be viewed by a number of people simultaneously, it was felt that the most appropriate display method would be an animation rather than an interactive installation. Interactivity is most suitable where the material is being viewed by an individual, who can manipulate it as they wish, but when a number of people are engaged simultaneously it is normally better to ensure that the viewing experience is more controlled. To this end a four minute animation has been produced which shows the three-dimensional reconstruction of Ligorio's map of Rome in 1552 with the various elements of Palladio's guide highlighted sequentially until these elements are all revealed. The four routes which demonstrate how the visitor can link up the various sites are then shown on the model and, as a route reaches a key building this is illustrated in more detail with photographs (where



possible). On completion of all the routes the model dissolves into an aerial view of Rome as it is today with the routes still shown and the buildings highlighted.

The normal method tor *displaying* such an animation is through the use of a large screen. However, in this case it was decided to employ a more innovative approach and use a method that has some associations with the period. In 1569 Daniele Barbaro, Palladio's most important patron, published a perspective manual for architects and painters in which he describes a camera obscura as an aid to accurate drawing.[8] Although the camera obscura was invented in the Middle Ages, it was not until the sixteenth century that lenses replaced the pin hole thus making the device much more practical for general applications. Most camera obscuras of the time were designed in the form of a box with a lens on one side and a translucent screen on the other. An image of the chosen scene was projected onto this screen so that it could be traced in order to create an accurate perspective drawing of the view. By the late eighteenth century, the camera obscura had been developed as a way of viewing urban panoramas by projecting an image gathered by a large periscope onto a horizontal surface, and it is an analogy of such a device that will be used in the Palladio exhibition.[9] A display environment has been developed in which the viewing surface is a circular horizontal table onto which the animation is projected from a data projector supported above the table. Such an approach fits well with the aerial views of the model that have been generated and is also appropriate as the detail in the model would not support street level views of the recommended routes.

Further outlets for the model

An exhibition has a very specific life expectancy whereas a computer model, along with associated information, can be mounted on the internet thus providing access into the future. A web site is therefore being developed to allow users to view material from the exhibition along with some additions.[10] As a number of the buildings and monuments that Palladio describes no longer exist, the web site will contain a map showing those that can be easily found today. The visitor will be able to select the sites that they wish to visit and the computer will create a document containing this personalised agenda along with a map and commentaries on each of the buildings.

The role of the internet and pod guides

Palladio's guidebooks represent a transitional stage between the medieval guide, with its myths and legends, and the modern guide which classifies buildings in an objective way and connects them using a series of logical routes. In the five hundred years that have passed since Palladio's time, although guidebooks have evolved through the inclusion of maps and photographs, their essence as catalogues of buildings and places has not changed. However, with the opportunities offered by digital technology, we are again at a point of potential transition. It is using a global positioning system (GPS) and to receive information via wireless communications. The internet provides a wide range of information types, from the authoritative academic article to the highly personal blog, all of which are equally accessible. In terms of city guides, the most recent commercial development is the pod guide, where an audio guide can be downloaded from the internet and used to navigate around an unfamiliar town.[11] Although these still tend to follow the familiar pattern of 'one guide fits all', their ease of production means that it is likely that multiple guides of the same place will evolve, each one customised to the needs of a particular social group. There is nothing to stop any resident producing their own audio guide, thus contributing to a potentially limitless collection of highly idiosyncratic insights into the world's cities.

As yet, pod guides are standalone applications and are not linked to any form of location identification. GPS systems in vehicles do provide some information on amenities which are close at hand, but these are fairly basic and geared towards the needs of the motorist. Some hand-held PDAs already contain GPS.[12] Linking this technology to a pod guide allows directional information to be included with a commentary being provided when a particular geographic location has been reached. In theory, visual information can also be provided, although a PDA screen is not an ideal environment on which to view a detailed reconstruction of the Colosseum! However, when the appropriate technology is available at consumer price levels, augmented reality will become a possibility, allowing digital reconstructions to be viewed, not in isolation on a computer screen, but while on the actual site. There are a number of studies which are pursuing technical developments of this kind,[13] some of which include ethnographic studies of how tourists behave.[14]

At the present time, the internet is the main source for digital city guides. However, the technology is already available to embed digital information in physical objects so that they can be identified electronically.[15] This has the potential to allow objects in the physical environment to broadcast information about themselves to nearby devices. Of course, the main application of such a technology is likely to be the conventional marketing of nearby restaurants and shops but it does have the potential for sites of architectural interest to make available information about themselves to local visitors.

Currently guidebooks fulfil two rather different functions. Before visiting a town they provide a valuable way of doing background research and, once in the city, they help with navigation and offer descriptions of the various buildings and monuments. The first of these two functions is already being supplemented by material on the internet and emerging technologies are likely to provide more engaging ways of undertaking the

second. In many respects what the visitor is looking for is the equivalent of a knowledgeable guide, someone who is aware of their preferences, can show them around a city and tell them about the things they are seeing. Audio guides work very well in such circumstances. The MP3 delivery technology is unobtrusive and such guides are already proving popular in museums and art galleries. One current limitation is that the device has no knowledge of where it is or what the visitor is looking at, and has to rely on them pressing a button to activate the next track. GPS systems have the potential to overcome this limitation and provide the visitor with information that is customised to their exact location. This will make the commentary much more responsive to the environment of the visitor and, by having multiple commentaries available, will provide an experience that is unique to that particular individual and place. Although a great deal of effort is currently being invested in providing the tourist with access to visual information while they are *in situ,* this may well be something of a diversion. A conventional map will always remain a useful reference tool and the spoken word has the power to transport the listener to another world. It is interesting to note that the rise of multi-channel digital television has not managed to silence radio broadcasting which, if anything, is increasing in popularity. To be able to visit a city and listen to a spoken commentary, which is exactly tuned to one's surroundings, has the potential to provide a much richer experience than multiple displays on high-tech gadgets.

On the brink of a new digital era?

Renaissance commentators such as Palladio were seeking ways of making sense of the complexities of the past as manifest in the ancient buildings and ruins that had survived. They were intent on weaving that material into a single coherent story which said as much about their ambitions as about the evidence that was around them. The exhibition that has been described will illustrate Palladio's two ways of looking at Rome - the itinerary-based method of medieval guides and the more modern, route-based approach - and will put these side by side for the first time. Palladio's own personal development illustrates this dichotomy, from 'di Pietro' the medieval stonemason, who was immersed in medieval myths and legends, to Palladio the architect, who did so much to define the architectural character of the Renaissance. In doing so he reinvented architectural history as a clear linear story with its roots in Roman antiquity.

We now live in a world where we are being bombarded with multiple interpretations of any event or object and have to make our own decisions about how they should be interpreted. Although it is unlikely that the traditional guidebook will ever be replaced, digital technology is providing an increasing number of ways in which these alternative views of the city can be made available at minimal cost. By using this technology to access the multiple interpretations of each building and place that are potentially available, it may well be that we are about to see a return to the 'mythic' understanding of the city that Palladio sought to reform.

Notes

1. Andrea Palladio, 'The Antiquities of Rome, 1554', in *Palladio's Rome,* trans, by Vaughan Hart and Peter Hicks (New Haven and London: Yale University Press, 2006), PP. 1-93.
2. Andrea Palladio, 'Description of the Churches, 1554', in *ibid,* pp. 95-176.
3. Palladio, 'The Antiquities of Rome, 1554'.
4. See Robert Tavernor, 'Palladio's "Corpus": I Quattro libri dell'architettura', in *Paper Palaces: the Rise of the Renaissance Architectural Treatise,* ed. by Vaughan Hart and Peter Hicks (New Haven and London: Yale University Press, 1998), pp. 233-246.
5. Palladio, 'Description of the Churches, 1554', p. 97.
6. <http://www.iath.virginia.edu/rome/first.html> [accessed 26 June 2007].
7. The main tool used for the construction of the model was SketchUp 5 for the buildings and monuments, along with AutoCAD 2004 for the terrain modelling. 3D Studio Max was used for the animations.
8. Daniele Barbaro, *La Practica della Perspettiva* (Venice, 1569), pp. 192-193, in: Martin Kemp, *The Science of Art: Optical themes in western art from Brunelleschi to Seurat* (New Haven and London: Yale University Press, 1990).
9. The first camera obscura used for observing a panorama was in Budapest in the 1780s.
10. See <http://www.bath.ac.uk/casa>.
11. An example is <http://ipod.wcities.com/city/rome> [accessed 26 June 2007].
12. PDA - Personal Digital Assistant, such as the Hewlett Packard iPAQ hW6900 series.
13. N. Ryan, T. S. Cinotti and G. Raffa, 'Smart Environments and their Applications to Cultural Heritage', in *Proceedings of UbiComp'05* (Tokyo, Japan, September 2005). See also <http://public-repository.epoch-net.org/publications/SMART/SMART.pdf> [accessed 26 June 2007]; P. Berridge, V. Koch and A. G. P. Brown, 'Information Spaces for Mobile City Access', *International Journal of Architectural Computing,* 1, 1 (2003), 34-45; M. Gibin, 'An Application of Location Based Services and GIS in Tourism Management and Promotion', in *Working Paper 11* (University of Eastern Piedmont Dipartimento di Studi per l'lmpresa ed il Territorio, February 2006); U. Kretschmer, V. Coors, U. Spierling, D. Grasbon, K. Schneider, I. Rojas, and R. Malaka, 'Meeting the Spirit of History', in *Proceedings of the 2001 Conference on Virtual Reality, Archeology, and Cultural Heritage* (VAST, November 2001).
14. B. Brown and M. Chalmers, 'Tourism and Mobile Technology', in *Proceedings of the Eighth European Conference on Computer-Supported Cooperative Work* (14-18 September 2003), ed. by K. Kutti and E. H. Karsten (Helsinki: Kluwer Academic Press, 2003); B. Brown, M. Chalmers, M. Bell, M. Hall, I. MacColl and P. Rudman, 'Sharing the Square: Collaborative Leisure in the City Streets', in *Proceedings of the Ninth European Conference on Computer-Supported Cooperative Work,* ed. by H. Gellersen, K. Schmidt, M. Beaudouin-Lafon, and W. Mackay (Paris, September 2005).
15. S. S. Fisher, 'Environmental Media: Accessing Virtual Representations of Real-time Sensor Data and Site-specific Annotations Embedded in Physical Environments', in *Enhanced Realities: Augmented and*

Unplugged: Proceedings of the Seventh International Conference on Virtual Systems and Multimedia, ed. by H. Thwaites and L. Addison (Los Alamos, California: IEEE, 2001), pp. 407-418.

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